

## ABSTRACT OF DISCLOSURE

A line buffer and a method of providing data to a 3x3 line interpolation processor using the line buffer in an image processing system, such as a digital camera, includes a readable and writable single memory, a buffer register having a prior data area storing first line image data, which has been stored in a memory, in a unit of  $2m$  bits, and having a present data area storing second image data, which is inputted from an image sensor in a unit of  $m$  bits, in a unit of the  $2m$  bits, and a memory controller providing the memory with a chip enable signal, a write enable signal, and an address indicating locations of the first and second line image data stored in the buffer register, reading and writing the first and second line image data from and on the memory, and outputting the first and second line image data and a third line image data, which is inputted from the image sensor.